What is Claimed is:

A polymer comprising a backbone, wherein the backbone comprises an
anhydride linkage, and wherein the backbone comprises one or more groups
that will yield a biologically active compound upon hydrolysis of the
polymer; provided that the biologically active compound is not an orthohydroxy aryl carboxylic acid.

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2. The polymer of claim 1 which comprises one or more units of formula (I) in the backbone:

$$-C(=O)R^{1}-X-R^{2}-X-R^{1}-C(=O)-O-$$
 (I)

wherein

each R¹ is group that will provide a biologically active compound upon hydrolysis of the polymer; provided that the biologically active compound is not an ortho-hydroxy aryl carboxylic acid

each X is independently an amide linkage, a thioester linkage, or an ester linkage; and

R²is a linking group.

- 3. The polymer of claims 1 or 2, wherein the biologically active compound is a non-steroidal anti-inflammatory drug, an anti-bacterial drug, an anti-fungal drug, an anti-cancer drug, an anti-thrombotic drug or an immunosuppressive drug.
- 4. The polymer of claims 1 or 2, wherein the biologically active compound is 3-amino-4-hydroxybutyric acid, 6-diazo-5-oxo-L-norleucine, aceclofenac, acediasulfone, alminoprofen, amfenac, amoxicillin, amphotericin B, ampicillin, apalcillin, apicycline, aspoxicillin, azaserine, aztreonam,

bambermycin(s), biapenem, bromfenac, bucillamine, bumadizon, candicidin(s), carbenicillin, carprofen, carumonam, carzinophillin A, cefadroxil, cefamandole, cefatrizine, cefbuperazone, cefclidin, cefdinir, cefditoren, cefepime, cefetamet, cefixime, cefmenoxime, cefminox, cefodizime, cefonicid, cefoperazone, ceforanide, cefotaxime, cefotetan, cefotiam, cefozopran, cefpimizole, cefpiramide, cefpirome, cefprozil, cefroxadine, ceftazidime, cefteram, ceftibuten, ceftriaxone, cefuzonam, cephalexin, cephaloglycin, cephalosporin C, cephradine, ciprofloxacin, clinafloxacin, cyclacillin, denopterin, diclofenac, edatrexate, effornithine, enfenamic acid, enoxacin, epicillin, etodolac, flomoxef, flufenamic acid, grepafloxacin, hetacillin, imipenem, lomefloxacin, lucensomycin, lymecycline, meclofenamic acid, mefenamic acid, melphalan, meropenem, methotrexate, moxalactam, mupirocin, mycophenolic acid, mycophenolic acid, nadifloxacin, natamycin, niflumic acid, norfloxacin, nystatin, oxaceprol, panipenem, pazufloxacin, penicillin N, pipemidic acid, podophyllinic acid 2-ethylhydrazide, procodazole, pteropterin, quinacillin, ritipenem, romurtide, S-adenosylmethionine, salazosulfadimidine, sparfloxacin, streptonigrin, succisulfone, sulfachrysoidine, sulfaloxic acid, teicoplanin, temafloxacin, temocillin, ticarcillin, tigemonam, tolfenamic acid, (N-((5-(((1,4-Dihydro-2-methyl-4-oxo-6-quinazolinyl)methyl)methylamino)-

5. The polymer of claim 3, wherein the anti-bacterial compound is acediasulfone, amfenac, amoxicillin, ampicillin, apalcillin, apicycline, aspoxicillin, aztreonam, bambermycin(s), biapenem, carbenicillin, carumonam, cefadroxil, cefamandole, cefatrizine, cefbuperazone, cefclidin, cefdinir, cefditoren, cefepime, cefetamet, cefixime, cefmenoxime, cefminox, cefodizime, cefonicid, cefoperazone, ceforanide, cefotaxime, cefotetan, cefotiam, cefozopran, cefpimizole, cefpiramide, cefpirome, cefprozil,

2-thienyl)carbonyl)-L-glutamic acid), tosufloxacin, trovafloxacin, ubenimex

or vancomycin.

cefroxadine, ceftazidime, cefteram, ceftibuten, ceftriaxone, cefuzonam, cephalexin, cephaloglycin, cephalosporin C, cephradine, ciprofloxacin, clinafloxacin, cyclacillin, enoxacin, epicillin, flomoxef, grepafloxacin, hetacillin, imipenem, lomefloxacin, lymecycline, meropenem, moxalactam, mupirocin, nadifloxacin, norfloxacin, panipenem, pazufloxacin, penicillin N, pipemidic acid, quinacillin, ritipenem, salazosulfadimidine, sparfloxacin, succisulfone, sulfachrysoidine, sulfaloxic acid, teicoplanin, temafloxacin, temocillin, ticarcillin, tigemonam, tosufloxacin, trovafloxacin, or vancomycin.

- 6. The polymer of claim 3, wherein the anti-fungal compound is amphotericin B, azaserine, candicidin(s), lucensomycin, natamycin or nystatin.
- 7. The polymer of claim 3, wherein the anti-cancer compound is 6-diazo-5-oxo-L-norleucine, azaserine, carzinophillin A, denopterin, edatrexate, eflornithine, melphalan, methotrexate, mycophenolic acid, podophyllinic acid 2-ethylhydrazide, pteropterin, streptonigrin, (N-((5-(((1,4-Dihydro-2-methyl-4-oxo-6-quinazolinyl)methyl)methylamino)-2-thienyl)carbonyl)-L-glutamic acid), or, ubenimex.
- 8. The polymer of claim 3, wherein the immunosuppressive compound is bucillamine, mycophenolic acid, procodazole, romurtide or ubenimex
- 9. The polymer of claim 3, wherein the non-steroidal anti-inflammatory compound is 3-amino-4-hydroxybutyric acid, aceclofenac, alminoprofen, bromfenac, bumadizon, carprofen, diclofenac, enfenamic acid, etodolac, flufenamic acid, meclofenamic acid, mefenamic acid, niflumic acid, oxaceprol, S-adenosylmethionine or tolfenamic acid.

- 10. The polymer of claim 4, wherein the biologically active compound is amoxicillin or cephalexin.
- 11. The polymer of claim 2, wherein the biologically active compound is carbidopa, or levodopa.
- 12. The polymer of claim 2 which is a polymer of formula (II) or(III) as illustrated herein above.
- 13. The polymer of claim 2, wherein R² is a divalent, branched or unbranched, saturated or unsaturated, hydrocarbon chain, having from 1 to 25 carbon atoms, wherein one or more (e.g. 1, 2, 3, or 4) of the carbon atoms is optionally replaced by (-O-) or (-NR-), and wherein the chain is optionally substituted on carbon with one or more (e.g. 1, 2, 3, or 4) substituents selected from the group consisting of (C₁-C₆)alkoxy, (C₃-C₆)cycloalkyl, (C₁-C₆)alkanoyl, (C₁-C₆)alkanoyloxy, (C₁-C₆)alkoxycarbonyl, (C₁-C₆)alkylthio, azido, cyano, nitro, halo, hydroxy, oxo, carboxy, aryl, aryloxy, heteroaryl, and heteroaryloxy.
- 14. The polymer of claim 2, wherein R² is a divalent, branched or unbranched, saturated or unsaturated, hydrocarbon chain, having from 1 to 25 carbon atoms, wherein the chain is optionally substituted on carbon with one or more (e.g. 1, 2, 3, or 4) substituents selected from the group consisting of (C₁-C₆)alkoxy, (C₃-C₆)cycloalkyl, (C₁-C₆)alkanoyl, (C₁-C₆)alkanoyloxy, (C₁-C₆)alkoxycarbonyl, (C₁-C₆)alkylthio, azido, cyano, nitro, halo, hydroxy, oxo, carboxy, aryl, aryloxy, heteroaryl, and heteroaryloxy.
- 15. The polymer of claim 2, wherein R^2 is a peptide.
- 16. The polymer of claim 2, wherein R^2 is an amino acid.

- 17. The polymer of claim 2, wherein R² is a divalent, branched or unbranched, saturated or unsaturated, hydrocarbon chain, having from 1 to 25 carbon atoms, wherein one or more (e.g. 1, 2, 3, or 4) of the carbon atoms is optionally replaced by (-O-) or (-NR-).
- 18. The polymer of claim 2, wherein R² is a divalent, branched or unbranched, saturated or unsaturated, hydrocarbon chain, having from 3 to 15 carbon atoms, wherein one or more (e.g. 1, 2, 3, or 4) of the carbon atoms is optionally replaced by (-O-) or (-NR-), and wherein the chain is optionally substituted on carbon with one or more (e.g. 1, 2, 3, or 4) substituents selected from the group consisting of (C₁-C₆)alkoxy, (C₃-C₆)cycloalkyl, (C₁-C₆)alkanoyl, (C₁-C₆)alkanoyloxy, (C₁-C₆)alkoxycarbonyl, (C₁-C₆)alkylthio, azido, cyano, nitro, halo, hydroxy, oxo, carboxy, aryl, aryloxy, heteroaryl, and heteroaryloxy.
- 19. The polymer of claim 2, wherein R² is a divalent, branched or unbranched, saturated or unsaturated, hydrocarbon chain, having from 3 to 15 carbon atoms, wherein one or more (e.g. 1, 2, 3, or 4) of the carbon atoms is optionally replaced by (-O-) or (-NR-).
- 20. The polymer of claim 2, wherein R² is a divalent, branched or unbranched, saturated or unsaturated, hydrocarbon chain, having from 3 to 15 carbon atoms.
- 21. The polymer of claim 2, wherein R² is a divalent, branched or unbranched, hydrocarbon chain, having from 3 to 15 carbon atoms.
- 22. The polymer of claim 2, wherein R² is a divalent, branched or unbranched, hydrocarbon chain, having from 6 to 10 carbon atoms.

- 23. The polymer of claim 2, wherein R² is a divalent hydrocarbon chain having 7, 8, or 9 carbon atoms.
- 24. The polymer of claim 2, wherein R² is a divalent hydrocarbon chain having 8 carbon atoms.
- 25. The polymer of claim 1, further comprising another therapeutic agent dispersed in the matrix of the polymer.
- 26. The polymer of claim 1, further comprising another therapeutic agent appended to the polymer backbone.
- 27. A pharmaceutical composition comprising a polymer of claim 1 and a pharmaceutically acceptable carrier.
- 28. A therapeutic method for treating a disease in an animal comprising administering to an animal in need of such therapy, an effective amount of a polymer of claim 1.
- 29. A therapeutic method for producing an anti-bacterial effect in an animal comprising administering to an animal in need of such therapy, an effective amount of a polymer of claim 5.
- 30. A therapeutic method for producing an anti-fungal effect in an animal comprising administering to an animal in need of such therapy, an effective amount of a polymer of claim 6.
- 31. A therapeutic method for treating cancer comprising administering to an animal in need of such therapy, an effective amount of a polymer of claim 7.

- 32. A therapeutic method for producing an anti-inflammatory effect in an animal comprising administering to an animal in need of such therapy, an effective amount of a polymer of claim 9.
- 33. A method for producing a biocompatible and biodegradable polyester or polyamide which degrades into a biologically active compound comprising co-polymerizing a biologically active compound containing at least two alcohol or phenol groups or at least two amine groups with carboxylic acid groups or bis(acyl) chlorides.
- 34. A method of delivering a biologically active compound to a host comprising administering to the host a biocompatible and biodegradable polyester or polyamide of any one of claim 1.